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Report of a Homeopathic Medication Regimen Containing Artemether/Lumefantrine in a Patient With Rheumatoid Arthritis

To the Editor:

Rheumatoid arthritis (RA) is a chronic debilitating disease that may require lifelong therapy.

As with many chronic diseases, the use of homeopathy is prevalent among RA patients, even though randomized trials found no benefit compared with placebo.[1,2] Homeopathic remedies are generally dismissed as benign because in theory they should not contain active ingredients because of the repeated dilution process invoked in their manufacture. However, clinicians should exert caution in this regard. The perception that homeopathic remedies are in fact placebo equivalents may be incorrect in part because the testing and regulation of homeopathic medications are inconsistent.[3] For example, some published reports found heavy metal contamination of homeopathic remedies.[4] Other studies have identified glucocorticoid agents contained in Unani and homeopathic medications.[5] Our current experience causes us to worry that homeopathic remedies may contain active ingredients by design if there exists financial motivation to lure patients away from conventional therapies. For purposes of highlighting this concern, we report a case of RA treated with homeopathic remedies containing the antimalarial medications artemether/lumefantrine.

CASE DESCRIPTION

A 23-year-old woman, who recently immigrated from India, was evaluated for her previously diagnosed RA. Her onset of symptoms was 3 years prior to presentation with inflammatory polyarthritis, elevated inflammatory markers, and a high-titer rheumatoid factor. She began treatment with nonsteroidal anti-inflammatory drugs and later low-dose steroids, whereupon she achieved her pre-illness baseline. After 3 months of conventional treatment, her family expressed concern for adverse effects of steroids, and the patient abandoned rheumatology care for a homeopathic regimen. Upon stopping the steroids, she experienced a significant polyarticular flare. She gradually improved and attributed the clinical improvement to homeopathic medication. Two and a half years later, she developed persistent wrist swelling, constant pain, and decreased range of motion causing her to supplement her homeopathic regimen with analgesics. She brought all her homeopathic medications to her appointment.

At presentation to our clinic, the physical examination was notable for polyarthritis. Plain radiography showed joint space narrowing, deformities, and radiolucencies in multiple carpal bones. Serological testing confirmed high-titer rheumatoid factor but negative anti–cyclic citrullinated peptide antibodies. Her Disease Activity Score 28 with C-Reactive Protein score was 4.58, representing moderate disease activity.

Her home treatment regimen consisted of 8 different homeopathic medications (7 pills and 1 liquid). The bottles were hand labeled as follows: (1) "Medorrhinum (derived from gonorrheal urethritis secretions)"; (2) "*Rhus tox* (poison ivy derivative)"; (3) "Bell (belladonna/nightshade derivative)"; (4) "*Colchicum* (derivative of meadow saffron flowering plant/genus colchicum)"; (5) "Liquid formulation M.P. (combination containing *Rhus tox*, *Bryonia alba*, *Filipendula ulmaria* or meadowsweet of which aspirin is derived, *Cimicifuga racemosa* or black kohash, *Urtica urens*—common nettle that contains histamine and acetylcholine, and 50% Q.S. alcohol)"; (6) "B71 combination with Acidum sulph (sulfuric acid), *Argentum metallicum* (silver), *Arnica montana* (wolf's bane, *Bryonia alba*, *Ledum palustre* [*Rhododendron tomentosum*])"; (7) "B19 (derivative of parvovirus)"; and an eighth medication with illegible labeling. It should be noted here that wolf's bane is classified by the US Food and Drug Administration as an unsafe herb because of its toxicity. These medications were analyzed using a Linksquare handheld spectrophotometer, which provides a qualitative measure of substances detected (Table 1).

DISCUSSION

We describe a case of a young woman with RA treated for years with multiple homeopathic remedies where the clinical disease progressed to damaging and persistently active arthritis. There are few published reports describing this experience.[6] Our current report not only adds an example to the putative ineffectiveness of homeopathic remedies in halting the progression of RA but further raises new concerns about the public health implications of some homeopathic interventions. Our analysis of this individual's treatment regimen uncovered the presence of combination antimalarial adulterants (artemether/lumefantrine). This analysis is limited based on limitations in the breadth of the database that the spectrophotometer references and has the possibility to miss some ingredients. Additionally, we were unable to quantify the daily dose as we did not have enough samples available for serial measurements. Artemether/lumefantrine is an accepted combination therapy used in the treatment of malaria. Adverse effects of artemether/lumefantrine include prolongation of the QT interval, hepatomegaly, myalgia, and arthralgia. Significant drug-drug interactions can occur because of extensive metabolism via the hepatic route including reduced hormonal contraceptive efficacy. Unlike quinine-based antimalarials, artemether/lumefantrine does not have an action that is beneficial to inflammatory arthritis.

Clinicians should be cautious about attributing patient-reported benefit from homeopathy to placebo effect. Homeopathic remedies may contain active ingredients that impact health.[3] Our case demonstrates that misattribution of benefit from homeopathic

TABLE 1. Spectrophotometer Qualitative Analysis of Homeopathic Medications

Homeopathic Medication Name/Number	Spectrophotometer Result
(1) Gonorrheal extract	Artemether/lumefantrine 20/120 mg
(2) *Rhus tox*	Artemether/lumefantrine 20/120 mg
(3) Bell	Artemether/lumefantrine 20/120 mg
(4) *Colchicum*	Sugar
(5) Liquid formulation M.P.	Not analyzed
(6) B71	Sugar
(7) B19	Sugar
(8) Label illegible	Sugar

intervention may be a cause of delay in traditional care resulting in an adverse outcome. In addition, unwitting exposure to pharmaceutical agents may lead to health misadventure in terms of drug-drug interactions, adverse cardiovascular effect, and adverse pregnancy outcomes. Finally, widespread use of homeopathic agents that possess antimicrobial properties may have public health implications when they have the potential to impact microbial resistance patterns.

Physicians should educate patients who take homeopathic and/or natural supplements about these issues. Our case highlights the need for further research on the impact of bedside assessment of homeopathic agents using a handheld spectrophotometer. This report underscores the need for public policy to address the question of oversight of the nutritional supplement industry.

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